Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's Rules to	)	CC Docket No. 94-102
Ensure Compatibility with Enhanced	)	
911 Emergency Calling Systems	)	
	)	
Wireless E911 Phase II Implementation	)	
Plan of Nextel Communications, Inc.	)	

NEXTEL COMMUNICATIONS, INC.
PHASE I AND PHASE II E911 QUARTERLY REPORT
August 2, 2004

To: Chief, Wireless Telecommunications Bureau
Chief, Enforcement Bureau

INTRODUCTION

Pursuant to the October 12, 2001, Order of the Federal Communications Commission ("Commission" or "FCC") in CC Docket No. 94-102,[1] Nextel Communications, Inc. ("Nextel") respectfully submits this Enhanced 911 ("E911") Quarterly Report on its implementation of Phase I and Phase II E911.

Nextel continues to devote substantial resources to E911 and has deployed 541 public safety answering points ("PSAPs") with Phase II E911 service since it achieved its first Phase II benchmark per Nextel's Waiver Order.[2] During this same period, Nextel brought its total Phase I deployments to 1036 PSAPs. Since its May 3, 2004, Report Nextel has deployed an additional 41 PSAPs with E911 Phase II service. Significantly,

[1] *In the Matter of Revision of the Commission's Rules To Ensure Compatibility With Enhanced 911 Emergency Calling Systems, Wireless E911 Phase II Implementation Plan of Nextel Communications, Inc.*, Order, CC Docket No. 94-102, FCC 01-295, released October 12, 2001 ("Waiver Order").

[2] Per the Waiver Order, Nextel was required to begin selling and activating an A-GPS capable handset on October 1, 2002.

Nextel deployed E911 Phase II service throughout the entire Commonwealth of Massachusetts on June 24, 2004.

As demonstrated by these activities, Nextel is committed to providing its customers and public safety officials with Phase II E911 as soon as possible. Recent events, however, have impeded Nextel's ability to deliver E911 Phase II location information to the 541 PSAPs capable of receiving location information. As explained in greater detail herein, due to latent software defect, the Assisted Global Positioning Satellite ("A-GPS") functionality in certain Phase II compliant handsets was no longer able to generate a GPS location. Without the ability to generate the GPS location, the handsets are not able to provide Phase II information to PSAPs. As described herein, Nextel is transmitting Phase I information (i.e., nearest cell site location and call-back number) in the event a 911 call is placed from a handset with the affected software. Nextel and its vendors—primarily Motorola, the manufacturer of Nextel's A-GPS handsets—worked quickly to ascertain the root cause of the problem and implement a solution that, once fully implemented, will enable customers with A-GPS handsets to access Phase II service where it is available.

Herein, Nextel provides an update on the state of its Phase I and Phase II progress, including a listing of all deployed and pending requests for Phase I and Phase II E911 service.

BACKGROUND

In its Waiver Request seeking an October 2002 Phase II E911 implementation date, Nextel affirmed that it could not launch on October 1, 2001, because no GPS capability existed for the integrated digital enhanced network ("iDEN") platform and it

was not technologically possible to develop an iDEN A-GPS handset capable of delivering FCC-compliant automatic location information ("ALI") prior to October 1, 2002. Moreover, the iDEN air interface, which is used by few other carriers and only on a regional basis, is supported by a single manufacturer—Motorola. Nextel, along with Motorola and the other vendors required to support E911, devoted substantial resources to develop, test, and install network hardware and software, and to develop, test and launch A-GPS capable iDEN handsets. After carefully analyzing and testing multiple location technologies, including a network-based solution and a hybrid network and handset solution known as Enhanced Observed Time Difference of Arrival, Nextel determined that the best, and in fact the only, technology option for bringing its iDEN network into compliance with the Commission's E911 Phase II accuracy requirements was to deploy the A-GPS solution.[3]

The Waiver Order, found that Nextel faced "special circumstances that affect its deployment of Phase II."[4] Accordingly, the Commission imposed the following Phase II E911 implementation benchmarks:

October 1, 2002:	Begin selling and activating A-GPS-capable handset;
December 31, 2002:	Ensure that at least 10% of all new handsets activated are A-GPS-capable;
December 1, 2003:	Ensure that at least 50% of all new handsets activated are A-GPS-capable;

[3] *See* Waiver Order at ¶ 16-17; Nextel Communications, Inc. and Nextel Partners, Inc. Joint Report on Phase II Location Technology Implementation and Request For Waiver, at 11-17, filed November 9, 2000.

[4] Waiver Order at ¶19. The Commission also stated "it is reasonable to expect that Nextel might find it more difficult to meet the same schedule as carriers employing the more common air interfaces, because location technology vendors and equipment manufacturers will have substantial incentives to introduce ALI products first for those segments of the market with larger market share. In addition, iDEN is a proprietary Motorola technology and, to the extent that a location technology requires new or modified handsets and network equipment, Nextel must rely on Motorola as a sole source provider." *Id.*

December 1, 2004: Ensure that 100% of all new digital handsets activated are A-GPS-capable;

December 31, 2005: 95% of all subscriber handsets in service are A-GPS-capable.[5]

To date Nextel has achieved its first two benchmarks,[6] continues to work toward its next benchmark and continues to deploy its valid requests for E911 service at a rapid pace. However, myriad issues including inadequate funding at local, state and federal levels, currently prevent the vast majority of PSAPs throughout the country from receiving and using a caller's latitude and longitude information and, given the *status quo*, most PSAPs likely will not be ready in the near future and perhaps even longer.

DISCUSSION

A. A-GPS Capable Handsets

Since the launch of its first A-GPS capable handset, the i88, on October 1, 2002, in compliance with its first Phase II handset deployment benchmark, Nextel has continued to introduce new A-GPS handsets, while phasing out non-A-GPS handsets, to drive penetration of location functionalities into its subscriber base. As of today, nearly all handsets Nextel offers for sale are A-GPS capable.[7] Nextel's complete A-GPS capable handset portfolio includes the following models: i58sr, i88s, i205, i305, i530,

[5] Waiver Order at ¶37.

[6] On October 1, 2002, Nextel launched its first A-GPS handset and turned on its first Phase II PSAP, thus fulfilling its first benchmark. In February of 2004, Nextel reported that 12% of all new activations between December 31, 2002, and November 30, 2003, were A-GPS capable, thus fulfilling its second benchmark.

[7] Pursuant to the Waiver Order, Nextel is not required to meet the 100% A-GPS new handset activation benchmark until December 1, 2004. Nextel plans to launch an A-GPS BlackBerry in compliance with that requirement. In addition, there is a trivial number of other devices which Nextel currently sells that do not contain A-GPS capability. Nextel will cease marketing these devices prior to December 1, 2004.

i710, i730, i733, i830 and the eleven i736 NASCAR Nextel Cup series handsets.[8] Nextel is actively marketing these handsets' location capabilities and taking special steps to put these A-GPS compatible phones into the hands of its users.

The FCC requires that handset based Phase II solutions provide the location of wireless calls within 50 meters for 67 percent of calls and within 150 meters for 95 percent of calls.[9] Based on the guidelines provided by the FCC's Office of Engineering and Technology, Nextel—via an independent third-party consultant—completed its accuracy testing prior to launching and met the Commission's standards.

B. A-GPS Handset Issue

On July 19, 2004, Nextel's sole handset vendor, Motorola, notified Nextel of a problem affecting Motorola i205, i305, i530, i710, i730, i733, i736, and i830 handsets. A latent problem in the software of these handsets rendered all A-GPS services unusable as of midnight, Greenwich Mean Time, July 18. To ensure that this software problem did not cause 911 calls from the affected handsets to drop, Nextel temporarily disabled the network component of its Phase II E911 A-GPS service, thus transmitting to PSAPs the caller's voice, nearest cell site location, and call-back number, *i.e.*, Phase I E911. Nextel immediately informed all of its Phase II-deployed PSAPs of this problem and of the need to temporarily limit Nextel's E911 functionality to Phase I.

The permanent solution to this A-GPS problem requires a two-part fix. The first part is an upgrade to Nextel's network to re-enable the transmission of latitude and

[8] Nextel markets ten NASCAR Nextel Cup Series Driver Phones, each featuring the number and unique design, colors, and signature of a particular driver. The lone NASCAR Nextel Cup Series Phone displays a checkered flag and an enlarged NASCAR Nextel Cup Series logo. Collectively, these handsets share the Motorola i736 model name.

[9] 47 C.F.R. § 20.18(h)(2). *See also*, "Guidelines for Testing and Verifying the Accuracy of Wireless E911 Location Systems," OET BULLETIN No. 71 (April 12, 2000).

longitude to Phase II deployed PSAPs. This network upgrade was successfully deployed in Nextel's network on July 25, 2004.

The second part of the solution requires updating the Motorola software in the affected handsets, including those already in customers' hands as well as those in Nextel's and Motorola's inventories. This upgraded handset software will enable these phones to once again generate a GPS fix for transmission to Phase II capable PSAPs. Nextel and Motorola have successfully developed and tested the updated handset software and have begun the process of upgrading the handsets.

The network upgrade noted above ensures that Nextel's network is capable of identifying whether a 911 call is being placed from a handset updated with the new software, or from a non-updated phone.[10] If a call is placed from an updated handset, that handset will automatically calculate its GPS location and Nextel's network will transmit E911 Phase II location information (assuming the PSAP is capable of receiving Phase II information) to that PSAP. If a 911 call is placed from a handset without the updated software, the handset will not attempt a GPS fix so Nextel will transmit Phase I information to the PSAP.[11]

At this time, Nextel does not have a specific timeline for updating the universe of affected phones on Nextel's network, but Nextel and Motorola are working on a plan to upgrade these handsets.

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[10] Importantly, the network changes required to differentiate between the handsets with old versus new software requires that Nextel also upgrade the software in its i58sr and i88s A-GPS handsets even though they were not directly impacted by the A-GPS software glitch.

[11] Because the GPS software glitch causes the handset to shut down and automatically reboot upon achieving a GPS fix, the handsets without the updated software cannot be allowed to generate a GPS fix. Doing so would cause the 911call to terminate at the moment GPS location information is generated.

C. Phase I Requests

With respect to the Commission's requirement that Nextel provide "information on all pending Phase I and Phase II requests,"[12] Nextel has attached an Appendix listing all of its 532 pending Phase I requests and their current status.[13] For each of the on-going Phase I deployment efforts, the Appendix provides, as required by the Commission, the master PSAP registry identification number ("PSAP ID"), PSAP name, PSAP state, PSAP county, request date, whether the request is valid,[14] a projected deployment date, reasons hindering deployment within the first six months of a PSAP's request and comments.[15] The proposed deployment dates in the Appendix are *target launch dates, which Nextel and the relevant PSAP are striving to meet*. Nextel is in contact with each of these PSAPs and is working to deploy Phase I E911 as soon as possible. Nextel has fully deployed Phase I E911 service with 1036 PSAPs, which are listed in the Appendix. With regard to its Phase I deployment efforts, Nextel reiterates herein that in some cases Phase I E911 deployments, similar to Phase II deployments, continue to be complicated by a number of factors – many of which are outside of Nextel's control.

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[12] *See* Waiver Order at ¶32.

[13] On June 6, 2003, the Commission released a Public Notice setting forth uniform requirements governing the Appendix format in which carriers submit Phase I and Phase II deployment information with each Quarterly Report. Per these requirements, Nextel has attached an Appendix listing all of its E911 deployments. *See* Public Notice, *Wireless Telecommunications Bureau Standardizes Carrier Reporting on Wireless E911 Implementation*, CC Docket No. 94-102, rel. June 6, 2003.

[14] Per the Waiver Order, Nextel is required to report whether it believes each deployment request is (or is not) valid. *See* Waiver Order at ¶32. On March 24, 2003, Nextel filed a letter in WT Docket No. 03-76 stating that Nextel has been and continues to be in contact with PSAPs that have requested Phase I or Phase II service and will deploy these PSAPs as soon as possible pursuant to a mutually agreeable implementation schedule. Thus, Nextel is complying herein with the Commission's requirement that it mark as "valid" or "invalid" each PSAP request, although as a practical matter, Nextel's deployment team is working with each PSAP's Phase I and Phase II pending request listed in the Appendix to deploy them as soon as possible pursuant to a mutually agreed-upon time frame.

[15] In some cases there are delays caused by technology issues. Such delays do not necessarily mean that the PSAP or Nextel is not "ready" for Phase I service. Rather, it often means there are issues involving incompatible technologies between Nextel, the LEC and/or the PSAP.

D. Phase II Requests

At the same time Nextel is deploying Phase I, it continues to deploy Phase II at those PSAPs capable of receiving and using the specific location information transmitted via Nextel's Phase II solution.[16] The Appendix lists every pending Phase II request and the Commission's required information including the PSAP ID, PSAP name, PSAP state, PSAP county, request date, whether the request is valid,[17] a projected deployment date, reasons hindering deployment within the first six months of a PSAP's request and comments. Nextel has 590 pending Phase II requests and has asked that each of these PSAPs provide the documentation required in the *Richardson Order* for determining the request's validity.[18]

Similar to Phase I deployments, the proposed Phase II deployment dates in the Appendix are *target launch dates, which Nextel and the relevant PSAP are striving to meet*.[19] Nextel reiterates that accomplishing such deployments is subject to numerous factors and parties outside of Nextel's control; thus, Nextel's deployment schedule establishes a goal toward which Nextel will work. It is possible, however, that complexities may be encountered that could delay some PSAP deployments. Nextel is in contact with each of these PSAPs and is working to deploy Phase II E911 as soon as

[16] Nextel has available to PSAPs two different methodologies for transmitting Phase II information—Emergency Service Routing Keys ("ESRK") and Emergency Services Routing Digits ("ESRD").

[17] *See supra* note 14.

[18] *See generally, In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Petition of City of Richardson,* Order On Reconsideration, CC Docket No. 94-102, FCC 01-293, released November 26, 2002. *See also*, Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Order on Reconsideration*, released Nov. 26, 2002.

[19] The A-GPS software defect delayed a few deployments while the network and handset software solutions were being developed. However, the speed with which Nextel was able to deploy the fix in its network and in handsets within Nextel's control (i.e, in inventory) ensured that PSAP deployment schedules were minimally impacted.

possible within mutually agreed upon time frames. Nextel will continue to dedicate significant resources to maintain its aggressive roll out schedule to PSAPs that are capable of receiving and using location technology.[20]

Since October 1, 2002, its first implementation benchmark, Nextel has deployed Phase II service with 541 PSAPs, which are included in the Appendix. Nextel remains actively engaged with PSAPs at multiple locations and anticipates deploying Phase II service in additional areas in the near future consistent with mutually agreeable timeframes.

Despite successful Phase II deployments in numerous areas such as Massachusetts, the District of Columbia; New Orleans; New York City; Miami-Dade, Florida; Houston, Texas; King County, Washington; and Denver, Colorado, the vast majority of PSAPs throughout the country are not ready to receive and use ALI for various reasons, some of which are outside a PSAP's direct control, *e.g.* lack of local, state and federal funding as well as a lack of E911 coordination bodies. Given the status quo, the majority of PSAPs in the country likely will not be prepared to receive or use ALI in the foreseeable future.

[20] Separate and distinct from deployment of its Phase II technology, but incorporated by reference in its Waiver Order, as a goodwill gesture Nextel has donated $25 million to the public safety community to facilitate rapid deployment of E911 throughout the country. In 2002 Nextel created a non-profit organization with an independent board of directors, Wireless E-911: The PSAP Readiness Fund (the "PSAP Readiness Fund"), to receive these funds from Nextel and to distribute them to the public safety community. The Association of Public-Safety Communications Officials ("APCO") and the National Emergency Number Association ("NENA"), two prominent, established public safety organizations that are significantly engaged in promoting PSAP readiness for wireless E911 service, have been the primary recipients of grants, in structured grant agreements committing the funds to further E911 deployment. *See, e.g.*, APCO's Public Safety Foundation of America—a primary recipient of PSAP Readiness Fund grants—at http://www.psfa.us/.

E. December 31, 2005, Benchmark

At this time, Nextel is informing the Commission that it may not meet the December 31, 2005, benchmark of 95% A-GPS handset penetration. After months of careful evaluation of customer trends, upgrade activity and continued low churn rates on Nextel's network, it has become evident that turning over nearly all of Nextel's users to an A-GPS enabled handset (despite currently activating nearly 100% A-GPS handsets) probably will not be achievable. The current software defect affecting all of Nextel's A-GPS handsets has significantly exacerbated this situation for Nextel, given that Nextel must now reflash the software in handsets that it previously had counted toward achieving the December 31, 2005, benchmark. Nextel will follow up soon with more information regarding its A-GPS handset penetration by December 31, 2005, once it better understands the challenges associated with upgrading the software in the A-GPS handsets already deployed across Nextel's network.

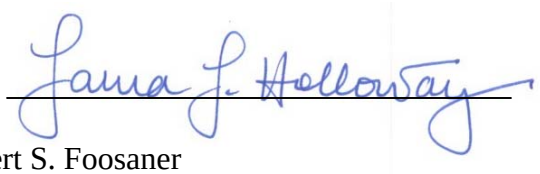
CONCLUSION

As required in the Waiver Order,[21] Nextel is providing this Quarterly Report to the Executive Directors and counsel of the Association of Public Safety Communications Officials-International, Inc. ("APCO"), the National Emergency Number Association ("NENA") and the National Association of State Nine One One Administrators ("NASNA"). Should any of these organizations or their individual PSAP members have questions or concerns about Nextel's submission, Nextel encourages them to contact

[21] Waiver Order at ¶32.

Laura Holloway, at the number listed below, as soon as possible to facilitate rapid and efficient deployment of Nextel's Phase I and Phase II E911 services.

Respectfully submitted,
Nextel Communications, Inc.

By: 

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